

**REMARKS**

In the Official Action mailed May 4, 2007, the Examiner has now issued a second Restriction Requirement and has again restricted the claims in the application into two groups, which are:

Group I: claims 42-111, drawn to a process for the production of a polymer layer of a pipe and method of producing a pipe; and

Group II: claims 112-116, drawn to a pipe.

The Examiner has now made an additional requirement that if Applicant elects Group I, Applicant must elect one a subspecies from the three following subgroups:

- i) A-F;
- ii) M and N;
- iii) X and Y,

wherein the subspecies were defined by the Examiner as being derived from the supporting unit element of claim 42 as follows:

- A) carcass;
- B) pressure armor;
- C) tensile armor;
- D) calibrating device;
- E) reinforcing layer;
- F) armor layer;

- M) the polymer layer being an inner liner;
- N) the polymer layer being an intermediate layer;
- X) gas permeation layer is a metal foil; and
- Y) gas permeation layer is an extruded polymer.

Applicants elect Group I and also elect subspecies A, M and Y, with traverse.

The Examiner states that the specific technical feature linking the two inventions is the method of making the cross-linked extruded polymer layer claimed in Group I, and that the claimed polymer layer composition does not provide a contribution over the prior art. According to the Examiner, U.S. patent No. 6,106,761 to Sjoberg et al. references a Finnish laid open specification No. 94106, in which a method for crosslinking a polyethylene tube using heated rollers is disclosed. As such, without specifically addressing the exact features, the Examiner claims that in view of Sjoberg et al., the special technical feature of Applicant's present invention does not define a contribution over the prior art under PCT Rule 13.2. Therefore, the two groups of inventions are not so linked as to form a single general inventive concept under PCT Rule 13.1. Applicant respectfully traverses this restriction requirement.

Section 806.02 of the MPEP states, "For the purpose of a decision on the question of restriction, and for this purpose only, *the claims are ordinarily assumed to be in proper form and patentable (novel and unobvious) over the prior art*" (emphasis added). Applicant submits that the Examiner is taking patentability into account when

reviewing the groups of inventions under PCT Rule 13.1. This is improper. Applicant respectfully requests withdrawal of this restriction requirement.

Notwithstanding the foregoing, Applicant submits that there is a special technical feature linking Groups I and II which forms a single general inventive concept under PCT Rule 13.1.

Sjoberg et al. teach a method of initiating crosslinking of a polyethylene polymer tube by extruding the polymer in direct contact with heated wheels to decompose the peroxide and initiate the crosslinking. The reference specifically states that the heat is on the surface and involves conduction through the polymer material, which is described in Sjoberg et al. as inefficient and likely to only crosslink the surface.

Applicant submits that Sjoberg et al. and Applicant's specification, both make it clear that obtaining a uniform crosslinking over the thickness of the polymer tube wall by thermal conduction is practically impossible without simultaneous degradation of the PE polymer. Furthermore, thermal conduction produces only crosslinking in the surface layer of the polymer tube wall, which results in a much weaker product than Applicant's claimed invention.

In contrast, Applicant's process uses infrared or microwave radiation instead of direct heating by conduction, which achieves a uniform crosslinking through at least 50% of the polymer tube wall. Applicant also

wishes to draw the Examiner's attention to the fact that Applicant's corresponding European Patent Application was granted (EP 1494845) over Sjoberg et al. (D2) with the full scope presented here.

Applicant submits that the process for production of a polymer layer of a flexible unbonded offshore pipe of claim 42 of the present invention, is a single general inventive concept linking the Groups I and II, and that the electromagnetic irradiation of the extruding pipe liner sufficient to initiate crosslinking of the polymer tube by heating it to the crosslinking temperature of the peroxide additive, does define a significant contribution over the prior art. As such, Applicant respectfully requests that the restriction requirement be withdrawn.


It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for examination on the merits. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,  
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